



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/824,285

04/14/2004

Bradley M. Ratliff

103752-48754

6051

21186

7590

02/23/2006

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH
1600 TCF TOWER
121 SOUTH EIGHT STREET
MINNEAPOLIS, MN 55402

EXAMINER

TANINGCO, MARCUS H

ART UNIT

PAPER NUMBER

2884

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/824,285	RATLIFF ET AL.	
	Examiner	Art Unit	
	Marcus H. Taningco	2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 28-35 is/are allowed.
- 6) ☒ Claim(s) 5-22 is/are rejected.
- 7) ☒ Claim(s) 23-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/27/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/27/06 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 2884

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5-13 and 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al. (US 5,866,900).

Re claims 5-12, Jacobson et al. disclose a method comprising the steps of: calibrating a first subset of detectors using a calibration source from a scene providing irradiance (Col. 4, 10-30); detecting energy from a scene 14 in a focal plane array 32, generating an output, and calibrating a first subset of detectors by correcting the output generated by a first subset of detectors and the output generated by a second subset of detectors using the correction provided to the first subset of detectors (Col. 1, 54-67; Col. 4, 1-44). Although Jacobson et al. is silent with regards to adjusting each detector's gain and bias to a defined value, those skilled in the art can appreciate that correction factors are adjusted in response to the correction data. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify each detector's gain and bias to a defined value in order to compensate for the different voltage offsets.

Re claim 13, Jacobson et al. teach a method comprising the steps of: calibrating at least one first detector 31₁₁ to generate calibration information (Col. 4, 1-9); and generating an image using at least one second detector 31₁₂, wherein the generated image is altered as a function of the calibration information (Col. 4, 10-30).

Re claims 15-22, Jacobson et al. disclose generating a gain and bias for at least one detector (Col. 2, 61-63). Although Jacobson et al. is silent with regards to adjusting each detector's gain and bias to a defined value, those skilled in the art can appreciate that correction

factors are adjusted in response to the correction data. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify each detector's gain and bias to a defined value in order to compensate for the different voltage offsets.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al. as applied to claim 13 above, and further in view of Tsai et al. (US 6,670,596).

Re claim 14, Jacobson et al. disclose calibrating at least one detector, but fail to disclose using a blackbody source defined by a blackbody density function. Tsai et al. teach a method for FPA calibration using a blackbody source (Col. 1, 37-45). Those skilled in the art can appreciate that each blackbody source is defined by a blackbody density function according to Planck's Law. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Jacobson et al. with a blackbody source in order to provide the desired calibration accuracy.

Allowable Subject Matter

The indicated allowability of claims 5-22 is withdrawn in view of the newly discovered reference(s).

Claims 1-4 and 28-32 are allowed.

Claims 23-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Re claim 1, the closest prior art teaches most aspects of the claimed invention except for calibrating a first and second subset of detectors using a calibration source.

Claims 23 and 28 recite the limitation wherein each inner detector generating a readout signal according to: $y_n(i,j) = a_{n,s}(i,j)z_n(i,j) + b_n(i,j)$ where $a_{n,s}(i,j)$ and $b_n(i,j)$ are gain and bias for each inner detector having coordinates i and j with the readout signal measured at time n .

Claim 31 recites the limitation wherein the imaging system provides a first and a second off-axis parabolic mirror.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus H. Taningco whose telephone number is (571) 272-1848. The examiner can normally be reached on M - F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MT


ALBERT J. GAGLIARDI
PRIMARY EXAMINER